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EXAMINER	
NGUYEN, HANH N	

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12

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/324,655	Applicant(s) TANAKA, MASASHI	
	Examiner Hanh Nguyen	Art Unit 2662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *Amendment filed on 02/17/04* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) *1-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 5-10, 16 and 17 are rejected under 35 USC 103(a) as being unpatentable over **Terasaki** (US Pat. No. 5,999,532) in view of **Greaves et al.** (US pat. No. 6,396,815 B1).

In claim 1, **Terasaki** discloses, in Fig.3, an ATM line concentrator 2 (subscriber line concentrator) is connected to an ATM switching unit 1 (ATM switching apparatus) via a User Network Interface (line concentrator is connected to an ATM switching apparatus via a UNI). See col.7, lines 50-57. Subscriber terminals 5, 8 (subscriber terminals) are respectively connected to transmission terminal circuits 17, 18 (network terminators) (a plurality of subscriber terminals are connected to network terminators respectively). See col.5, lines 1-15. The concentrator 2 establishes SVCs to the subscriber terminals via transmission terminal circuits (concentrator accommodates VCs to network terminators). See col.7, lines 5-20. Concentrator 2 includes a signaling termination circuit 20 (a substitution call control function) that executes a signaling procedure between the ATM switch 1 and concentrator 2; and subscribers 5, 8 to establishes VC therebetween (line concentrator includes a substitution call control function to substitute for network terminators and subscriber terminals). See col.6, lines 5-10. **Terasaki** does not disclose the network terminators and subscriber terminals do not have

call control functions. **Greaves et al.** discloses, in Fig.1, an interconnect mesh 105 (a CPE) within a home comprising end stations 140 (subscriber terminals), external control point 120 (network terminator), and external controller 110 (substituition call control) comprising proxy agents 113, 115, 118. End stations 140 can not support signaling stack. Instead, control protocol of end stations 140 are controlled by the external controller 110 to perform signaling and management functions (subscriber terminals do not have call control functions). See col.8, lines 6-17. The external controller 110, on behalf of end stations 140, acts as proxy to perform virtual connection set up. See col.8, lines 25-35.

Based upon the teaching of **Greaves et al.** 's system that reduce the hardware and software cost of end stations 140 by banishing all control software to devices outside the mesh 105 (see Abstract), therefore; it would have been obvious to one ordinary skill in the art to modify the **Terasaki** 's system by removing the setup capability (call control functions) of subscriber terminals and keep the setup capability at the ATM concentrator which, on behalf of subscriber terminals, network terminators to request setup virtual connections without using call control functions installed in the subscriber terminals.

In claims 5, 6 and 16, **Terasaki** discloses line concentrator 2 , transmission terminal circuit 17, and subscriber terminal 5 are connected through PVC 23 when the subscriber terminal 5 sends a request to the line concentrator 2 (line concentrator, network terminator and each subscriber are connected by a PVC connection). See col.7, lines 60-65.

In claims 7, 8 and 17, **Terasaki** discloses subscriber 5 sends a connection request through PVC 23 which has values VPI=0, VCI=5 (PVC connection has VPI/VCI value of 0/5). See col.7, lines 60-65.

In claims 9 and 10, **Terasaki** discloses, in Fig.3, broadband subscribers 5-8 sending requests for virtual connections through transmission terminal circuits, ATM line concentration unit 2 and AM switch 1 (call control message is transmitted and received in a same protocol as that for a subscriber data). See col.4, line 65 to col.5, line 5.

Claims 11, 12, 13, 14 and 15 are rejected under 35 USC 103(a) as being unpatentable over **Terasaki** (US Pat. No. 5,999,532) in view of **Greaves et al.** (US pat. No. 6,396,815 B1), and further in view of **Mendelson et al.** (US Pat. No. 6343083 B1).

In claims 11 and 12, **Terasaki and Greaves** not disclose call control message is transmitted/received by a classical IP and ARP over ATM. **Mendelson et al.** discloses, in Fig.2, ARP (ARP) request made by PC 218 on data network 216 (classical IP) is transmitted through ATM endpoints 222 of ATM network 210 (call control message is transmitted and received by a classical IP and ARP over ATM system). See col.13, lines 1-10. Therefore, it would have been obvious to one ordinary skill in the art to use ARP protocol made by **Mendelson et al.** in **Terasaki** 's concentrator to transmit request using IP and ARP over ATM switches. The motivation is to transmit high speed data such as DSL via Internet without installing expensive hardware, software at subscribers.

In claims 13 and 14, **Terasaki** does not disclose call control message is transmitted by XDSL over ATM through PVC connection. **Mendelson et al.** discloses, in Fig.2, connection request (call control message) is transmitted over ADSL line 224 via ATM network 210. The request message is sent over the control VC (PVC connection). See 8, lines 35-50. **Mendelson et al.** does not disclose XDSL. However, XDSL is a general term and is well-known in the art. It

comprises high-bit-rate DSL , adaptive-bit- rate DSL, symetrical DSL. Therefore, it would have been well-known skill in the art to adapt XDSL comprising high-bit-rate DSL , adaptive-bit-rate DSL, symetrical DSL, and ADSL into Terasaki. The motivation is to transmit high speed data such as DSL via Internet without installing expensive hardware, software at subscribers.

In claim 15, **Terasaki** does not disclose subscriber terminal and a corresponding network terminator are connected in IEEE 802.3 ethernet. **Mendelson et al.** discloses packet transmitted between PC 218 (subscriber) and ATM endpoint 222 uses IP over Ethernet protocol (IEEE 802.3 Ethernet). See col. 8, lines 32-40 & col.9, lines 20-37. Therefore, it would have been obvious to one ordinary skill in the art to use IEEE 802.3 Ethernet disclosed by **Mendelson et al.** to connect subscriber terminals together in a local are network. The motivation is to transmit high speed data such as DSL from subscribers in Ethernet Lan without installing expensive hardware, software at subscribers.

Claims 2-4 are rejected under 35 USC 103(a) as being unpatentable over **Terasaki** (US Pat. No. 5,999,532) in view of **Greaves et al.** (US pat. No. 6,396,815 B1), and further in view of **Hijikata et al.** (US Pat. No. 5,864,537).

In claims 2-4, **Terasaki** discloses a connection request generated by subscriber 5 is transmitted through network terminator 17 to line concentrator 2 via SVCs, PVC 23 (subscriber terminal issues a call request to line concentrator, network terminator). See col.7, lines 50-65. **Terasaki** does not disclose a line number is held. **Hijikata et al.** discloses, in Fig.7A, line number #1 (line number) connected from corresponding subscriber (subscriber terminal) to distributor #1 (a line number connecting between subscriber terminal and network terminal is

held). See Fig.7A, col.7, lines 50-60. Therefore, it would have been obvious to one of ordinary skills in the art to modify the **Terasaki** by having the management table of **Hijikata et al.** in the line concentrator 2 to store the line number with purpose of identifying line number allocated via a virtual connection to subscribers.

Response to Arguments

Applicant's arguments with respect to claims 1-17 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kato (US Pat. No. 5,999,514) discloses Virtual Connection on Establishment Controlling Apparatus in a Cell Switching System and Subscriber Service Providing Method, for Use in a Cell Switching System.

Enoki et al. (US Pat. No. 6,421,345 B1) discloses ATM Device.

Screedharan et al. (US Pat. No. 6,473,430 B2) discloses System and Method for Connecting Frame Relay Devices via ATM network using Frame Relay proxy Signaling Agent.

Chen (US Pat. No. 6,563,835 B1) discloses Call Processing Arrangment for ATM Switches.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh Nguyen whose telephone number is 703 306-5445. The examiner can normally be reached on Monday-Friday 8:00 AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on 703 306-4744. The fax phone numbers for the organization where this application or proceeding is assigned are 703 305-3988 for regular communications and 703 308-9051 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 305-4700.

Fax: 703 872-9314

Hanh Nguyen

Febuary 26, 2004